UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/955,004	09/17/2001	Ming Chi Chen	CSN 4702	7879

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EXAMINER
MCLEAN MAYO, KIMBERLY N

ART UNIT	PAPER NUMBER
2187	

DATE MAILED: 12/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/955,004	CHEN ET AL.
	Examiner	Art Unit	
	Kimberly N. McLean-Mayo	2187	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>17 September 2001</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
    closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-17</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-9,12,13,16 and 17</u> is/are rejected.

7)☒ Claim(s) <u>10,11,14 and 15</u> is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>17 September 2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
        application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date <u>12/9/04</u>.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   The enclosed detailed action is in response to the Application submitted on Spetember

17, 2001.

Claim Rejections - 35 USC § 112

2.   Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing

to particularly point out and distinctly claim the subject matter which applicant regards as the

invention.

Claim 5 recites a legacy low-bandwidth parallel bus coupling the serial interface of the host and

daughtercard. It is not understood what is meant by coupling the serial interface of the host and

daughtercard. The specification and the drawings illustrate a serial bus coupling the serial

interface of the host and the daughtercard.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4.   Claim 1 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Bass et al.

(USPN: 6,029,155).

Regarding claim 1, Bass discloses a serial link coupling serial ports on the first and second

devices (Figure 1, interface between References 1·10 and 120-124; C 5, 63-67; C 6, L 1-5; Figure

2b, Reference 220 – interface between serial port coupled to 220 and any of the peripheral

devices [Fig. 1, Refs. 120-124]); a serial communication controller for implementing a clear

channel for transmitting and receiving serial data (Figure 2b, Reference 220); a first controller

programmed to implement a first messaging protocol for responding to messages from the

second device and for sending messages including memory write, memory read and open/close

virtual channel connection messages (Figure 2b, Reference 210; C 6, L 18-30); on the second

device, a second controller programmed to implement a second messaging protocol responding

to messages from the first device and for sending messages forwarding designated data types

[such as weight readings] to the first device (logic within the peripheral device which interprets

and processes the commands received from the host).

Regarding claim 12, Regarding claim 12, Bass discloses a high bandwidth serial link coupling

the host and daughtercard (Figure 1, interface between References 110 and 120-124; C 5, 63-67;

C 6, L 1-5; Figure 2b, Reference 220 – interface between serial port coupled to 220 and any of

the peripheral devices [Fig. 1, Refs. 120-124]); on the host, a host serial controller for

transmitting and receiving data over the serial links (Figure 2b, Reference 220); a host processor

programmed to implement a serial messaging protocol for enabling daughtercard management

operations (read/write) to be performed by the host utilizing the serial link (Figure 2b, Reference

210; C 6, L 18-30); on the daughtercard a daughtercard serial interface for transmitting and

receiving data over the serial link (interface connected to the serial interface of Reference 220 in

Figure 2b); a daughtercard protocol controller programmed to implement a serial protocol

command to provide information required by the host to manage the daughtercard (logic within

the peripheral device which interprets and processes the commands received from the host).

5.   Claims 6-7, 8, 13 and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by

Howard (PGPUB: US 2002/0078244).

Regarding claim 6, Howard discloses on a first device transmitting a read memory command to

the second device to request data stored on the memory of the second device, transmitting a read

memory command with data to be stored in the memory of the second device, transmitting

control information to the second device (Section 0036-0037); on a second device, transmitting

formatted data to the first device (Section 0037, last two lines).

Regarding claim 7, Howard discloses including a data structure in a write command to control

the functionality of the second device (section 0049).

Regarding claims 8, 13 and 17, Howard discloses providing a serial link between the host and

daughtercard (Figure 1, Reference 20; Section 0025, Lines 6-8; Section 0044, Lines 7-9);

defining a plurality of serial protocol commands forming a serial protocol enabling daughtercard

management operations to be performed utilizing the serial link (the commands are defined by

programming the hardware to execute certain command for certain functions; all command

operated hardware is controlled by software/device drivers which program the commands);

specifying a command encapsulation format to encode the plurality of commands to implement

the serial protocol (Figure 3; the organization of the command and embedded information, for

example read/write, <file id>, <key>, this is the format for the read and write command

encapsulating the file id and key).

6.   Claims 8-9, 13-14 and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by

Wang (USPN: 6,553,441).

Regarding claims 8, 13 and 17, Wang discloses providing a serial link between the host and

daughtercard (Figure 1, Reference 103); defining a plurality of serial protocol commands

forming a serial protocol enabling daughtercard management operations to be performed

utilizing the serial link (C 3, L 40-43); specifying a command encapsulation format to encode the

plurality of commands to implement the serial protocol (C 3, L 43-60).

Regarding claims 9 and 14, Wang discloses defining memory management serial protocol

commands for enabling the host to manage memory on-board the daughtercard (C 3, L 46-60)

and defining dependent serial protocol commands for initializing and/or change the configuration

of the daughtercard (C 2, L 60-64; the daughtercard is initialized and changes when the registers

are set up to enable certain functions)

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

8.   Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bass (USPN:

6,029,155).

Regarding claim 2, Bass discloses a high bandwidth serial link coupling the host and

daughtercard (Figure 1, interface between References 110 and 120-124; C 5, 63-67; C 6, L 1-5;

Figure 2b, Reference 220 – interface between serial port coupled to 220 and any of the peripheral

devices [Fig. 1, Refs. 120-124]); a host serial controller for transmitting and receiving data over

the serial links (Figure 2b, Reference 220); a host processor programmed to implement a serial

messaging protocol for transmitting commands and data to the daughtercard over the serial link

including a write memory command that writes data to the memory on the daughtercard and a

read memory command that identifies data to be read from the memory on the daughtercard

(Figure 2b, Reference 210; C 6, L 18-30); on the daughtercard a daughtercard serial interface for

transmitting and receiving data over the serial link (interface connected to the serial interface of

Reference 220 in Figure 2b); a daughtercard protocol controller programmed to implement a

serial messaging protocol to respond to commands received from the host, including responding

to memory read and write commands and for forwarding formatted data received from the

peripheral to the host (logic within the peripheral device which interprets and processes the

commands received from the host). Bass does not explicitly disclose forwarding data received

from a network to the host. Bass teaches an interfacing system to peripheral devices. A network

card is a peripheral device. It is well known in the art to interface a host system to a network

interface for receiving formatted data from the network for allowing the host to access exchange

data with other systems on the network. Thus it would have been obvious to one of ordinary

skill in the art to use a network card in Bass' system wherein the host received formatted data

from the network for the desirable purpose of data sharing and efficient information exchange.

Regarding claim 3, Bass does not disclose implementing the controller as a FPGA. However, it

is well known in the art to configure controllers using FPGAs because FPGAs allow easy

prototyping and testing since the device can be reprogrammed fairly easily. Hence, it would

have been obvious to one or ordinary skill in the art to implement the Bass' controller as a FPGA

for the desirable purpose of efficient prototyping.

Regarding claim 4, Bass does not disclose implementing the controller as an ASIC. However, it

is well known in the art to configure controllers using ASICs because ASICs allow low powered

system design . Hence, it would have been obvious to one or ordinary skill in the art to

implement the Bass' controller as an ASIC for the desirable purpose of power efficiency.

Allowable Subject Matter

9.   Claims 10-11 and 14-15 are objected to as being dependent upon a rejected base claim,

but would be allowable if rewritten in independent form including all of the limitations of the

base claim and any intervening claims.

Conclusion

10.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Kimberly N. McLean-Mayo whose telephone number is 703-308-

9592. The examiner can normally be reached on M (10:00 - 6:30); Tues, Thr (10:00 - 4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Donald Sparks can be reached on 703-308-1756. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KIMBERLY MCLEAN-MAYO   Kimberly N. McLean-Mayo
PRIMARY EXAMINER   Examiner
                                         Art Unit 2187

KNM

December 9, 2004